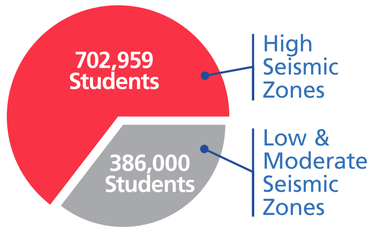
Washington State
SCHOOL SEISMIC SAFETY ASSESSMENT PROJECT

Reid Middleton

SEISMIC RISK & PROJECT SUMMARY

~65%
of 1,088,959 Public School Students are in **High Seismic Zones**

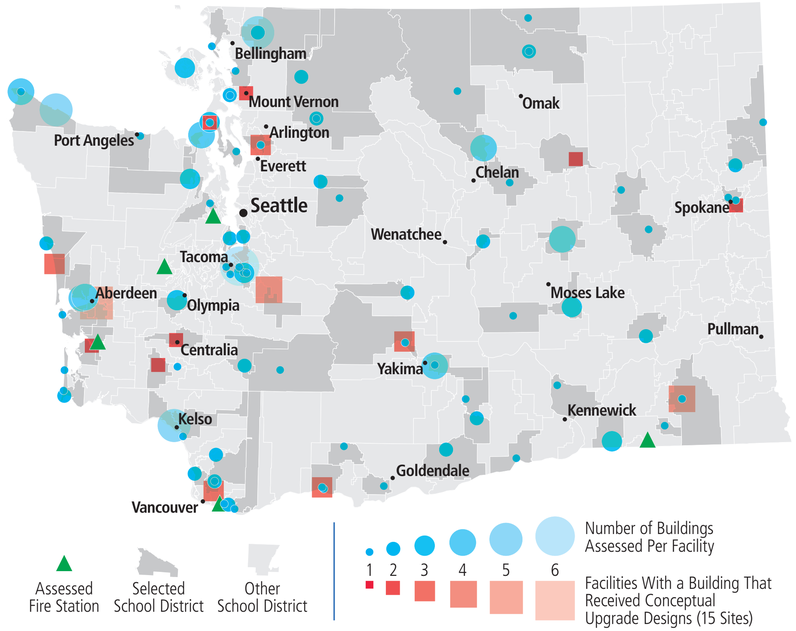


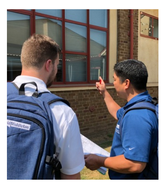
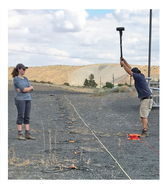
In the Next 50 Years

~10-20%
Probability of an **M9.0+** Earthquake

~80%
Probability of an **M6.0+** Earthquake

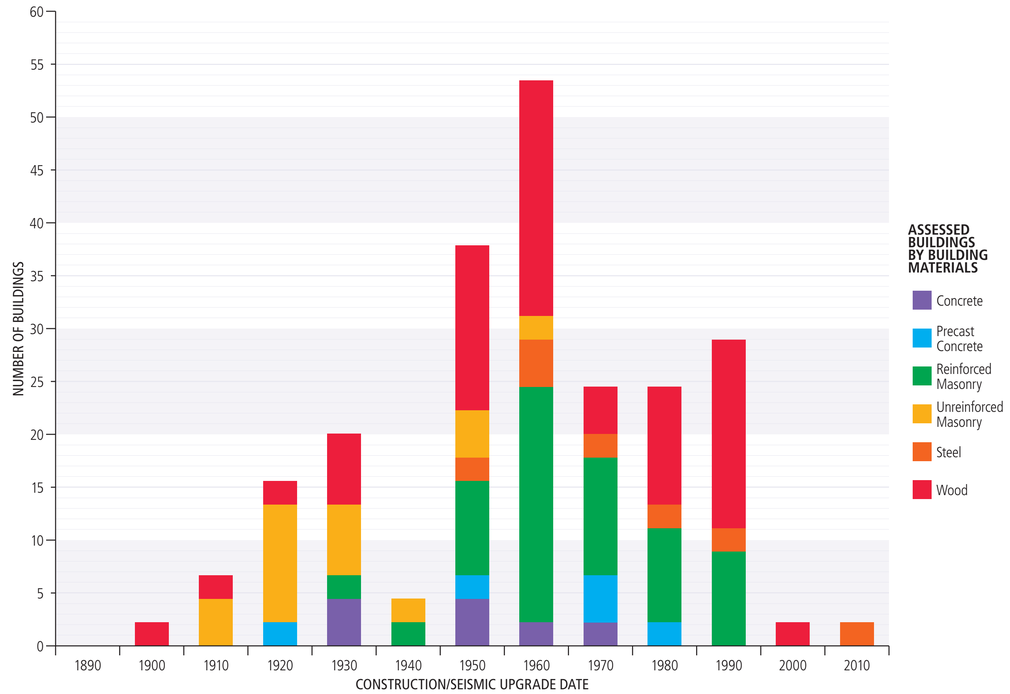
222
School Buildings Studied from **75 School Districts**



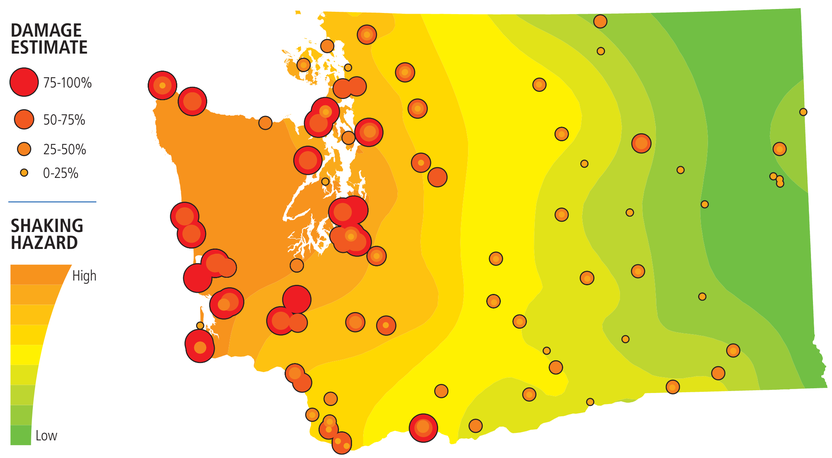



PROJECT RESULTS

AGE & TYPE DISTRIBUTION OF BUILDINGS STUDIED



BUILDING DAMAGE ESTIMATES



1963
Average Year of Construction

~50%
Non-Compliant Seismic Features for Pre-1950s Buildings

~25%
Buildings **too Costly to Repair** After Design Earthquake

~60%
Unsafe Buildings
After Design Earthquake

Cost to Upgrade
an Existing Building is Only
~5%-50%
of the **Cost to Replace**
a Damaged Building

Washington State has many older school buildings built prior to the adoption of modern seismic safety codes. Older buildings and more vulnerable construction types (especially URM and concrete buildings built prior to 1970) are more at risk of collapse in an earthquake. Schools in high seismic hazard areas and on weak soil are also more vulnerable to collapse.